



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
841 Chestnut Building  
Philadelphia, Pennsylvania 19107

Mr. Andrew Rola  
B&V Waste Science and Technology Corp.  
Public Ledger Bldg., Suite 272  
Philadelphia, PA 19106

November 8, 1991

Dear Mr. Rola:

The following are my initial comments on the draft Feasibility Study (FS) for the Brown's Battery Breaking Site. I will forward additional comments as they become available, but not later than November 15, 1991. Contact me immediately if this delay will create a problem in meeting your current deadlines.

Feel free to continue modifying the FS based on the comments you received to guide your draft of the Proposed Plan, i.e. modifying ground water alternatives to address all ARARs.

- 1) Page 8-2 4th Para. Specify if Table 8-1 is the FS process for soils only or for the entire FS. Explain the differences in the FS process for soils and the two aquifers.
- 2) Figure 8-1 Include "For Soils" in title if appropriate.
- 3) Figure 8-2 Include "For Overburden Aquifer" in title if appropriate.
- 4) Section 9.2.1 Change the No Action alternative to not have any remedial actions except monitoring (surface water, sediments, and air.) Include a contingency for additional environmental sampling (i.e. bioassays). I recommend discussing the potential for this activity but not including it in the cost estimate. Monitoring surface water, sediments, and air should be included in all of the "soil remedies" and ground water monitoring should be a part of all ground water remedies. Implement the preceding comment throughout the document. This includes removing all references to institutional controls, fencing, and other access controls and including monitoring when describing, comparing, and developing costs for the remedies. It is also recommended to discuss environmental sampling (bioassays) and sampling in the section(s) regarding flood control.
- 5) Section 9.2.1 2nd para. End the sentence after "negligible" and delete "or where...frame."

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- 6) Section 9.2.4 last sentence Reference the section which discusses activities to prevent/minimize releases during flooding events.
- 7) Pg. 9-8 Expand the last paragraph to include the cost-savings associated with transporting treated material as nonhazardous vs. transporting untreated hazardous waste for offsite disposal.
- 8) Pg. 9-10 last para. Specify "Appendix".
- 9) Section 9.3.1 1st sentence Change "Technologies" to "Actions". Replace the three bullets with a description of the monitoring. Delete the last sentence in the second paragraph "No...access restrictions" and rephrase the last sentence in the section.
- 10) Table 9-3 Delete "fencing" and "signs" and replace with "monitoring".
- 11) Pg. 9-13 1st para. Typo.
- 12) Pg. 9-18 Section 9.3.5 2nd para. Include excavation areas with those identified as needing berms and dikes.
- 13) Pg. 10-1 Modify Alternative 1.
- 14) Pg. 10-1 To my knowledge, 500 ppm lead was never determined to be a maximum in the OSWER Directives, but rather an acceptable range of 500 ppm - 1000 ppm. Please verify/correct in light of all EPA Soil Lead Guidance (8/29/91 Guidance enclosed). Review the last paragraph on page 9-4 as well since it also refers to 500 ppm as the "maximum allowable concentration." Feel free to contact either myself or Dick Brunner for clarification.
- 15) Update Section 10.1.1.
- 16) 10.1.2.1 1st bullet Assume the Brendel trailer will be moved prior to the start of remedial action. Change the language to allow the moving of the other (Stuebner) trailer to an offsite location. For cost purposes, keep demolition and disposal costs since they should be higher.
- 17) 10.1.2.1 3rd bullet Change "streams" to "surface water."
- 18) 10.1.2.1 Include transportation and disposal of all other site wastes (i.e junk cars, garbage piles, etc). Determine if this material will have to be sampled and/or decontaminated prior to disposal.
- 19) Pg. 10-3 Delete 3rd bullet and add monitoring.

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20) Pg. 10-3 1st para. Include containment, treatment and disposal of all wastes generated by decontamination activities.

21) Pg. 10-3 3rd para. Reference any flood control documents that have been prepared (i.e. analysis of USACE proposal and the plan B&V (?) put together). Originally, flood control was supposed to be a separate section. Please contact me to discuss the detail of information to be presented or referenced.

22) Section 10.1.2.2 Address the other debris (material that can not be treated such as tree trunks) or debris that will be encountered during excavation activities. Address the management, treatment, and disposal of this material as well as any residual waste that will have to be managed. Transportation is included in this section but not disposal. Address disposal of treated material at the appropriate location in 10.1.2.

23) Section 10.1.3 Include monitoring of surface water, sediments, and air and a contingency for environmental sampling.

24) Pg. 10-5 2nd para. Change "10.1.3" to "10.1.2".

25) Section 10.1.4 See comment #23.

26) Section 10.2 1st para. Spell out "BoM" since its the first time its used in several chapters.

27) Pg. 10-12 2nd bullet (Effectiveness) Clarify the last sentence "some of the alternatives include residual disposal..." All of the alternatives must fully address residual disposal (as well as management, treatment, etc.) and this appears to be a weakness throughout the report. Please review all of the alternatives to insure residuals from treatment, decontamination and other site-related activities and untreatable wastes that are presently onsite are all adequately addressed.

28) Table 10-3 2nd ARAR Change "500" to "1000." Include Cultural Resource ARARs.

29) Table 10-4 is missing or numbering of tables is incorrect.

30) Table 10-5 Evaluate the casings and soil separately for Alternative 4. Magnitude of Residual Risk is low for both soils and casings, but Adequacy and Reliability of Controls is fair for casings and good for soils (it must be good for soils since it was good for soils in Alternative 2). Likewise for "Demonstrated Ability to Meet...", it is unknown for casings but good for soils. Please re-evaluate or explain reasons for high safety considerations.

31) Pg. 10-16 is a duplicate of 10-15.

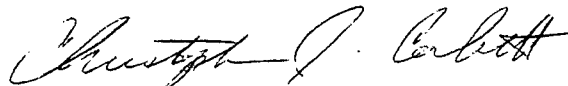
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I have also attached comments from Dick Brunner and Robert Davis for integration into the FS. I did not detect any contradictions in our comments, however I recommend the last comment from Mr. Davis not be addressed until the remedial design stage since specific information will be required from the Biological Technical Assistance Group.

Also enclosed are comments from Mr. Doug Donor that pertain to both the RI and FS. Please contact me immediately if you are unable to address his comments in light of the comments you have received to date.

Feel free to contact me immediately if you have any questions or require additional information.

Sincerely,



Christopher J. Corbett, RPM  
Central PA Section (3HW22)

AR300449



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**REGION III**

841 Chestnut Building  
Philadelphia, Pennsylvania 19107

October 28, 1991

**SUBJECT:**

A review of the Identification and Screening Technologies  
section of the October 1991 RI/FS of the Browns Battery Site

**FROM:**

Richard L. Brunker, Ph.D. Senior Toxicologist  
Technical Support Section, HWMD (3HW15)

**TO:**

Chris Corbett, RPM  
Central PA Section, (3HW27)

Section nine (9) of this RI/FS was reviewed in order to ascertain whether the proposed cleanup methods and concentration levels are realistic and in concord with current guidance. It should be appreciated at this juncture that guidance in this regard is not as precise as it could be and there is some confusion regarding policies compared to hazards and cleanup goals. Definitive answers regarding actions to be taken are difficult to construct and choices regarding cleanup actions are challenging and require considerable study and careful consideration.

The section came to grips with the array of directives and guidance sources including them Lead Uptake Biokinetic model (version 4.0). Attempts were made in the narrative to differentiate between average and threshold levels as well as unrestricted site versus restricted site usage. The cleanup goals and criteria were reasonable well supported. Those responsible for risk management decisions are provided the current justifications for the information provided.

The latest update to OSWER Directive #9355.4-02 (Aug. 29, 1991) did not appear to be cited in this document. A review of this update reveals that there is still much lacking concerning definitive guidance regarding how cleanup criteria are to be established and how they are to be calculated. This has resulted in a confusing situation regarding lead cleanup standards and goals. The Agency is attempting to provide guidance in the use of the UBK model and promises a "Site-Specific Guidance Manual" for this purpose in the future.

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Reference is made to the AutoCAD™ software and its proposed use in the generation of lead concentrations to be used in cleanup activities. This may resolve the problem concerning precisely what soils should be removed and replaced with uncontaminated fill. This problem has never been addressed in Agency guidance.

The average risk-based soil cleanup level for unrestricted site use is specified as 225 ppm. This number was originally derived from the UBK Model using regional-specific assumptions in place of the default options available in the model. The use of this number as an average may conflict with the essence of the guidance presented in the Update on OSWER Soil Lead Cleanup Guidance (Aug 29, 1991). It may be prudent to address just how the information in this document and the guidance document concur or differ. There appears to be considerable latitude in the guidance document for site-specific considerations. This is no simple or easy task as this field is currently in disarray with much controversy among experts in the field.

Otherwise the risk related aspects of this document appear to be reasonable and complete. There should be sufficient information to provide those responsible for risk management decisions with an overall prospective of the conditions at this facility and the factors that must be considered in determining how this cleanup should be facilitated.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
841 Chestnut Building  
Philadelphia, Pennsylvania 19107

SUBJECT: Brown's Battery Breaking Site: Feasibility Study

FROM: Robert S. Davis, Coordinator (3HW15)  
Biological Technical Assistance Group

TO: Chris Corbett, Project Manager (3HW12)  
Rich Watman, Project Manager (3HW12)  
Brown's Battery Site

The BTAG has reviewed the Feasibility Study for the Brown's Battery Breaking Site. The following comments are submitted on behalf of EPA, NOAA and USFWS.

- The document suggests that no post-remediation monitoring of the sediments, surface water and biota is needed because waste will be processed and removed from the site (section 11-3). However, the document further states that sediment and surface water samples will be collected from surrounding waterways during the remedial action, but no biological data or post remedial monitoring is proposed.

- It is recommended that pre- and post-remediation bioassessment be included to address potentially toxic releases associated with excavation.

- Long-term monitoring of stream sediments (normalized to TOC and grain size), surface water and biota (e.g. sediment toxicity testing using Chironomus tentans as performed during the RI) should be included in the remediation to evaluate the effectiveness of the remediation and potential releases from ground water and surface water run-off.

- Included in this long-term monitoring should be some soil chemistry reconnaissance that should be followed up by soil toxicity testing if warranted. The RPM should contact the BTAG coordinator for details of exploring soil toxicity testing as a monitoring tool.

If you have any questions concerning these comments, please contact me at 597-3155.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

AUG 29 1991

OFFICE OF  
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Update on OSWER Soil Lead Cleanup Guidance

FROM: Don R. Clay  
Assistant Administrator  
Solid Waste and Emergency Response

TO: Addressees

PURPOSE

This memorandum addresses the progress of the Office of Solid Waste and Emergency Response (OSWER) in updating the directive #9355.4-02 entitled "Interim Guidance on Establishing Soil Lead Cleanup Levels at Superfund Sites" (September 1989).

BACKGROUND

Currently, as set forth by OSWER directive #9355.4-02, EPA recommends an interim soil cleanup level of 500 - 1000 ppm total lead for CERCLA sites characterized as residential. This directive is being revised to:

1. Account for the contribution of various media to total lead exposure, and the variability of each medium's contribution with location and age of the exposed population, and
2. Provide a strong scientific basis for choosing a soil lead cleanup level for a specific CERCLA/RCRA site.

OSWER believes that the best available approach is to use the EPA Uptake Biokinetic (UBK) Model as a risk assessment tool to predict blood lead levels and aid the risk management decision on soil lead cleanup levels at CERCLA/RCRA sites which are characterized as residential.

OBJECTIVE

The EPA UBK Model, which was mentioned in OSWER directive #9355.4-02 as a tool for site-specific assessment of total lead exposure, will predict blood lead levels in the most sensitive

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populations (i.e., children 0-6 years old) exposed to lead in air, dust, drinking water, soil, and paint. The UBK Model:

1. Underwent Agency review in its use for the National Ambient Air Quality Standard (NAAQS);
2. Was used to support rulemaking for the Clean Air Act and the Safe Drinking Water Act;
3. Was adapted and reviewed for Superfund application;
4. Was validated at several Superfund sites; and
5. Has default parameters documented by the Office of Research and Development (ORD).<sup>1</sup>

The UBK Model can be run with either site-specific data or its default parameters. Concern exists, however, over the use of the default parameters versus site-specific data for input to the model. OSWER has decided to address these concerns, as well as the appropriate method to use for collecting site specific data, before issuing a directive recommending the UBK model as the preferred method for setting lead cleanup levels at CERCLA/RCRA sites. To this end, the Science Advisory Board (SAB) has agreed to review the UBK model and its applicability for developing site-specific soil lead cleanup levels at CERCLA/RCRA sites. Also, a technical workgroup consisting of Regional, ORD, and OSWER scientists in consultation with outside experts is presently developing a "Site-specific Guidance Manual" which will provide guidance to site managers for determining why and when to collect site-specific data for the model. The guidance will include appropriate protocols and sampling strategies for collecting the site-specific data (e.g., soil, indoor/outdoor dust, paint, etc.) Once this guidance is complete, and the SAB issues have been resolved, EPA expects to release this guidance in conjunction with a revised OSWER directive recommending the UBK model as a risk assessment tool to develop soil lead cleanup levels at CERCLA/RCRA sites.

To assist in the implementation of this revised directive, once it is issued, the technical workgroup mentioned above will:

1. Review inputs and technical applications of the model, within 2-4 weeks of receipt, to aid site managers in the appropriate and consistent application of the model to individual site conditions;
2. Provide clarification and assistance to the Regions in the use and interpretation of the Site-specific Guidance Manual, such as the type of data to use in the Model;
3. Provide scientific support for those cases which the workgroup has reviewed and found the use of the model to

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be both appropriate and justified; and

4. Collect data pertaining to the use of the model and Regional site-specific information which will be used to refine and further validate the model.

Once the revised directive is issued, Headquarters has recommended that, whenever the UBK model is used to help determine cleanup levels for a site, the Regions should consult the workgroup on the parameters utilized in the model and the reasons for their selection.

#### DISCUSSION

We are aware that a number of Regions are already using the UBK Model to develop soil lead cleanup levels at their sites and that the current directive allows for deviations from the 500 - 1000 ppm range due to site-specific conditions. We recommend a model projection benchmark of either 95% of the sensitive population having blood lead levels below 10 ug/dl or a 95% probability of an individual having a blood lead level below 10 ug/dl. This recommendation is consistent with EPA's Agency-Wide Lead Strategy.<sup>2</sup> When the model is run using this benchmark, as well as each of the model's default parameters (i.e. no site-specific data is input), an acceptable soil level of approximately 500 ppm is predicted for lead. For those Regions which have used or are planning on using the model prior to release of the revised directive, and who have developed soil lead cleanup levels which fall outside the 500 - 1000 ppm range, Headquarters has requested that the Assistant Administrator of OSWER be consulted prior to implementation of those cleanup levels. The use of the UBK model in these situations is considered precedent-setting and, as such, a formal consultation with Headquarters is recommended as set forth in OSWER directive #9012.10-1 entitled "Clarification of Delegation of Authority" (April 1990). Headquarters should also be consulted on removal actions which use soil lead cleanup levels derived by the UBK model and which fall outside the 500 - 1000 ppm range. For further information please contact Susan Griffin of the Toxics Integration Branch at FTS 475-9493.

#### DISCLAIMER

The recommendations in this document are intended solely as guidance. EPA decision makers may act at variance with any of the recommendations contained in this document. These recommendations are not intended and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States. These

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recommendations may change at any time without public notice.

#### REFERENCES

1. USEPA, 1990. Technical Support Document on Lead. Draft. Cincinnati, OH. Office of Health and Environmental Assessment, Office of Research and Development, U.S. Environmental Protection Agency. ECAO-CIN-757
2. USEPA, 1991. Strategy for Reducing Lead Exposure. Washington D.C., Office of Toxic Substances, U.S. Environmental Protection Agency. Available from the Toxic Substances Control Act Hotline (202) 554-1404.

#### Addressees:

Directors, Waste Management Division, Regions I, IV, V, VII, VIII  
Director, Emergency and Remedial Response Division, Region II  
Directors, Hazardous Waste Management Division, Regions III, VI,  
IX  
Director, Hazardous Waste Division, Region X  
Superfund Branch Chiefs, Regions I-X  
Regional Counsels, Regions I-X

AR300456

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
841 CHESTNUT BUILDING  
PHILADELPHIA, PENNSYLVANIA

October 30, 1991

SUBJECT: RCRA Programs Review of Brown's Battery Breaking  
Remedial Investigation and Feasibility Study (RI/FS)

FROM: *Douglas A. Donor*  
Douglas A. Donor, LDR Program Manager  
PA Permits Section (3HW51)

TO: Christopher J. Corbett, RPM  
Central PA Section (3HW27)

I have reviewed the RI and FS for the Brown's Battery Breaking (BBB) site as requested in your September 16, 1991 memorandum. Since most of the RCRA program comments are directed to the FS, I waited for receipt of that document prior to providing these comments. This should meet your comments requested date of November 12, 1991.

The comments are directed primarily at the applicability of RCRA requirements to the BBB remediation in accordance with the RCRA statute and regulations or as relevant in ARARs. The RCRA review is somewhat simplified since the RCRA hazardous waste is exclusive to characteristic waste by the Toxicity Characteristic Leaching Procedure (TCLP) for lead and due to the site location in a flood plain, all wastes, either after treatment, or to be treated will be moved off-site. Specific comments are presented below.

Throughout the RI and FS it is stated several times that much of the material and soil at the site exceeds the TCLP (TC) level for lead, that subject the material and soil to RCRA regulations. Examples of this in the RI are on pages 1-12, 3-30, and 5-6. I would prefer that somewhere in the RI/FS the TC results be presented as to levels and location of the sampling. My impression is that the RI/FS assumes everything is TC lead characteristic waste. This is important for the applicability of RCRA because if the waste materials/soil does not exceed the TC levels it is not subject to RCRA. Once the wastes are subject to RCRA they are subject to the Land Disposal Restrictions (LDR). The LDRs require that the wastes be treated so that they do not exceed 5 ppm lead as measured by the TC prior to land disposal. However once they meet this level they are no longer RCRA hazardous wastes.

The BBB RI/FS recognizes the applicable RCRA requirements, including the LDRs for the wastes. I have no concerns with the recommended alternatives of 2, treatment of the wastes on-site to below TC levels and disposal in a subtitle D landfill, or 3, sent off-site for treatment prior to disposal in a subtitle D landfill. Both are in compliance with the RCRA requirements. If alternative 2 is chosen there is a LDR paperwork requirement under 40 CFR section 268.9 that requires the Regional Administrator be notified of that action. If alternative 3 is chosen then the waste must be manifested and accompanied with a LDR notification under 40 CFR section 268.7.

You should be aware that the LDRs allow TC lead wastes to be treated to the EP Tox levels as opposed to TC, as the TC test is much more aggressive leaching procedure for lead. This is not of much benefit, however, as the waste would meet the LDR treatment standard, but if it failed the TC test it is still a RCRA characteristic waste. It is better to treat the waste to pass the TC level and remove it from RCRA regulation. At least you know this option is there.

You should also be aware that EPA will be proposing a new set of LDR regulations for contaminated debris that may expand the options available for disposition of some of the materials at the BBB site. These proposed regulations should be published in the Federal Register soon. I will provide a copy to you as soon as it is available. The new LDR standards for contaminated debris must be final by May 8, 1992. If the remediation will take place after that date these regulations should be studied. Between the date of these comments and May 8, 1992, inorganic debris material may be disposed of in a RCRA landfill that meets minimum technology requirements (MTR) without being treated to the TC levels. This is due to a national capacity variance that exists for such wastes. It appears material such as the battery casings could meet the definition of inorganic debris. I have attached pages 3871, 3872 and 3877 of the January 31, 1991 FR notice that support this option if the material will be disposed of prior to May 8, 1992.

It appears that some battery disposal sites are investigating the possibility of using the battery casing waste as a fuel substitute. I would recommend that this option be considered, as it would reduce the volume of waste that ultimately would be land disposed and make some use of the waste material. It is my understanding that the Exide/General Battery RCRA facility in Reading Pennsylvania is capable of using the casings in this manner. In order to stabilize the casings they would have to be ground to a fine dust to facilitate binding in a stabilization. This is mentioned in the alternatives but I am

not sure if the difficulty in stabilizing this material has been thoroughly explored. According to my knowledge of treatment technologies and based on the description of the wastes at the BBB site I would agree that stabilization is the only reasonable and feasible treatment for most of the waste material and contaminated soil.

The information in the RI/FS indicates that contaminate levels found in groundwater and stream sediments do not fail the TC levels and are not RCRA wastes. Also, since no RCRA, or RCRA like units are at the site, or will be created in the remedy, RCRA is not applicable. Therefore I offer no comments on the groundwater remediation. On pages 9-12 and 9-14 of the FS temporary waste piles are discussed. I believe they will be created in the Area of Contamination (AOC) and will not trigger LDRs. I would recommend containers versus a pile. If a pile is created, caution should be used in its use and the timeframe it is needed. EPA is proposing a bulk storage unit in the same FR notice on contaminated debris. The problem is, this is a permanent structure that substitutes for a pile. I do not think it will be practical at a temporary CERCLA remediation. It may be considered as a ARAR for a pile if this bulk storage unit is codified in the regulations after May 8, 1992. Another instance of changing RCRA regulations to consider.

If you have any questions on the above comments or need additional information or clarification on RCRA requirements please contact me at 7-9884

Attachment  
cc: P. Gotthold (3HW51)